

Tests, treatments and procedures at risk of inappropriateness in Italy  
that Physicians and Patients should talk about.

## Five Recommendations from the Italian Society for Pediatric Respiratory Diseases (SIMRI)

1	<p><b>Do not perform chest X-ray in a child with suspected non-severe community-acquired pneumonia or with uncomplicated acute asthma.</b></p> <p>In case of suspected pneumonia in a child, X-ray findings are not useful to suggest the etiology or to distinguish between a bacterial or non-bacterial pneumonia. Chest X-ray does not affect the clinical outcomes, but rather exposes children to additional radiation doses with increased Health Care costs.</p> <p>Chest X-ray is normal or negative in most children with acute asthma attacks, and is not recommended unless in cases with suspected complications (pneumothorax or pneumomediastinum or consolidation) or that do not respond to treatment.</p>
2	<p><b>Do not use salmeterol in children with acute asthma.</b></p> <p>In children with acute asthma, long-acting beta2-agonists (LABAs) are not recommended, because of slow onset of action (10-20 minutes). Clinical data on safety in children are really limited. Moreover, in children with acute asthma salmeterol monotherapy increases the risk of hospitalization and the need for invasive ventilation. In children with acute asthma short-acting beta2-agonists (SABAs) are recommended, even with repeated doses and combined with anticholinergic medications. Supplementary oxygen and early systemic steroids are also recommended.</p>
3	<p><b>Do not perform CT scans in children in the absence of strict clinical indications.</b></p> <p>It is recommended that CT scans are performed exclusively in the presence of clinical features suggesting CT-detectable lung changes. It is also crucial that pediatricians or pneumologists determine the clinical indications to CT, so that the radiologists use the most appropriate protocols with the lowest radiation exposure (ALARA principle - As low as reasonably Possible). The chest CT scan is a fundamental diagnostic test for many respiratory diseases, as it allows to visualize in detail all the thoracic structures and the pulmonary parenchyma. Unfortunately, the CT is burdened by the inevitable exposure to ionizing radiation (corresponding, for a traditional chest CT scan, to about 150 chest radiographs), which, in pediatric age, constitutes a significant biological risk increasing the incidence of many neoplasms. Should CT be necessary, it is recommended to adopt pediatric CT protocols in order to obtain good images with minimal radiation exposure.</p>
4	<p><b>Do not prescribe antihistamines for preventing asthma in children.</b></p> <p>The use of antihistamines is not recommended for preventing asthma in children. The goals of asthma treatment are to achieve symptoms control and reduce risk of exacerbations. Antihistamines are recommended only in patients with asthma and associated allergic rhinitis in order to achieve the control of symptoms such as rhinorrhea, sneezing and nasal pruritus.</p>
5	<p><b>Asthma should not be diagnosed without performing spirometry.</b></p> <p>Spirometry is the best tool for assessing lung function in asthmatic children, and allows to define the disease severity, monitor the response to pharmacological treatment and achieve symptoms control. Patient's history and physical examination alone, not combined with spirometry results, may underestimate or overestimate asthma control. In addition to the economic burden to the Health Care System, the consequences of misdiagnosis include a delay in the diagnosis and in the start of treatment. Spirometry is recommended:</p> <ul style="list-style-type: none"> <li>• at the first assessment, in order to determine the disease severity</li> <li>• after treatment is started, during the follow-up visits in order to optimize therapy</li> <li>• when exacerbations occur</li> <li>• at least every 1-2 years in cases with intermittent asthma</li> </ul> <p>The response to bronchodilator should be carried out regularly. Spirometry can be achieved in children as young as five years if criteria for acceptability are satisfied.</p>

Please note that these items are provided only for information and are not intended as a substitute for consultation with a clinician. Patients with any specific questions about the items on this list or their individual situation should consult their clinician.

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## How this list was created

SIMRI, after having formally joined the campaign "Doing more does not mean doing better- Choosing Wisely Italy" and "Slow Medicine", has identified a working group formed by experts among its members (senior and junior). The Board has assessed the emerging points and selected those considered most significant, accompanying the final draft with the related motivations and the necessary bibliography.

## Sources

<b>1</b>	<ol style="list-style-type: none"> <li>1. Zuccotti GV. Manuale di Pediatria. La Pratica Clinica. II Ed 2016, Esculapio Editrice</li> <li>2. Harris et al. British Thoracic Society guidelines for the management of community acquired pneumonia in children: update 2011. Thorax. 2011 Oct; 66 Suppl 2: ii1-233</li> <li>3. Gestione dell'attacco acuto di asma in età pediatrica. Linee guida SIP. Aggiornamento 2016. www.sip.it</li> <li>4. Global Strategy for Asthma Management and Prevention (GINA), 2016 update. www.ginasthma.org</li> </ol>
<b>2</b>	<ol style="list-style-type: none"> <li>1. Global Strategy for Asthma Management and Prevention (GINA), 2016 update. www.ginasthma.org</li> <li>2. Fergeson JE et al. Acute asthma, prognosis, and treatment. J Allergy Clin Immunol. 2017 Feb; 139 (2): 438-47</li> <li>3. Liao MM et al. Salmeterol use and risk of hospitalization among emergency department patients with acute asthma. Ann Allergy Asthma Immunol. 2010 Jun; 104 (6): 478-84</li> <li>4. Stempel DA et al. Safety of adding Salmeterol to Fluticasone Propionate in children with Asthma. N Engl J Med. 2016 Sep 1; 375 (9): 840-9</li> <li>5. BTS/SIGN British guideline on the management of asthma, 2016. www.brit-thoracic.org</li> </ol>
<b>3</b>	<ol style="list-style-type: none"> <li>1. Papaioannou G et al. Multidetector row CT for imaging the paediatric tracheobronchial tree. Pediatr Radiol. 2007 Jun; 37 (6): 515-29</li> <li>2. Pearce MS et al. Radiation exposure from CT scans in childhood and subsequent risk of leukaemia and brain tumours: a retrospective cohort study. Lancet. 2012 Aug 4; 380 (9840): 499-505</li> <li>3. Mathews JD et al. Cancer risk in 680,000 people exposed to computed tomography scans in childhood or adolescence: data linkage study of 11 million Australians. BMJ. 2013 May 21; 346: f2360</li> <li>4. Macdougall RD et al. Managing radiation dose from thoracic multidetector computed tomography in pediatric patients: background, current issues, and recommendations. Radiol Clin North Am. 2013 Jul; 51 (4): 743-60</li> </ol>
<b>4</b>	<ol style="list-style-type: none"> <li>1. BTS/SIGN British guideline on the management of asthma, 2016. www.brit-thoracic.org</li> <li>2. Fitzsimons R et al. Antihistamine use in children. Arch Dis Child Educ Pract Ed. 2015 Jun; 100 (3): 122-31</li> <li>3. Global Strategy for Asthma Management and Prevention (GINA), 2016 update. www.ginasthma.org</li> </ol>
<b>5</b>	<ol style="list-style-type: none"> <li>1. Global Strategy for Asthma Management and Prevention (GINA), 2016 update. www.ginasthma.org</li> <li>2. Miller MR et al. ATS/ERS Task Force - Standardisation of spirometry. Eur Respir J. 2005 Aug; 26 (2): 319-38</li> <li>3. Moeller A et al. ERS Task Force Monitoring Asthma in Children - Monitoring asthma in childhood: lung function, bronchial responsiveness and inflammation. Eur Respir Rev. 2015 Jun; 24 (136): 204-15</li> <li>4. National Asthma Education and Prevention Expert Panel Report 3: Guidelines for the diagnosis and Management of Asthma. NIH Publication Number 08-5846 October 2007. <a href="http://www.nhlbi.nih.gov/files/docs/guidelines/asthsumm.pdf">http://www.nhlbi.nih.gov/files/docs/guidelines/asthsumm.pdf</a></li> </ol>

**Slow Medicine**, an Italian movement of health professionals, patients and citizens promoting a Measured, Respectful and Equitable Medicine, launched the campaign "**Doing more does not mean doing better- Choosing Wisely Italy**" in Italy at the end of 2012, similar to Choosing Wisely in the USA. The campaign aims to help physicians, other health professionals, patients and citizens engage in conversations about tests, treatments and procedures at risk of inappropriateness in Italy, for informed and shared choices. The campaign is part of the Choosing Wisely International movement. Partners of the campaign are the National Federation of Medical Doctors' and Dentists' Orders (FNOMCeO), that of Registered Nurses' Orders (FNOPI), the Academy of Nursing Sciences (ASI), National Union of Radiologists (SNR), Tuscany regional health agency, PartecipaSalute, Altroconsumo, the Federation for Social Services and Healthcare of Aut. Prov. of Bolzano, Zadig. [www.choosingwiselyitaly.org](http://www.choosingwiselyitaly.org); [www.slowmedicine.it](http://www.slowmedicine.it)

**The Italian Society for Pediatric Respiratory Diseases (SIMRI)** was founded on September 24, 1995 and has the following goals:

- to support scientific research in the field of respiratory disorders, through its study groups;
- to promote scientific collaboration with the main Italian and international companies;
- to spread the teaching and knowledge of the treatment of pediatric respiratory diseases.

Furthermore, SIMRI promotes awareness on issues of significant social impact, such as the consequences of cigarette smoking and passive smoking on children's respiratory health.

The official organ of the Society is the magazine "Pneumologia Pediatrica", which in every issue (four outings per year), investigates respiratory disorders in children. The magazine is available in the online version for all its members. SIMRI has over 600 members and is divided into several Study Groups. On the website ([www.simri.it](http://www.simri.it)) it is possible to know in full the activities of the Company.